

THAT WHICH IS CLAIMED IS:

1. A method of establishing a connection to a network device which does not have an assigned network address, comprising:

5 establishing a connection from a configuring device to the network device
utilizing an unassigned network address for the network to which the network device is attached irrespective of whether the network device is attached to a network local to or remote from the configuring device.

2. The method of Claim 1, further comprising configuring the network
10 device utilizing the established connection.

3. The method of Claim 1, wherein establishing a connection to the network device comprises:

15 receiving a connection request from a configuring device on a network local to the network device and remote from the configuring device, wherein the connection request includes the unassigned network address;

20 sending an Address Resolution Protocol (ARP) message on the remote network responsive to receiving the connection request, the ARP message containing the unassigned network address; and

wherein the network device carries out the following:

responding to the ARP message to assume ownership of the unassigned network address;

evaluating the received ARP message to determine a source address for the ARP message;

25 setting a default routing path for messages to networks other than the remote network to the source address for the ARP message;

receiving the connection request; and

responding to the connection request using the default routing path so as to establish the connection utilizing the assumed unassigned network address.

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4. The method of Claim 3, wherein responding to the ARP message is preceded by determining if another device attached to the remote network has responded to the ARP message; and

wherein responding to the ARP message, setting a default routing path, 5 receiving the connection request and responding to the connection request are carried out if another device has not responded to the ARP message.

5. The method of Claim 4, wherein determining if another device 10 attached to the remote network has responded to the ARP message comprises monitoring the remote network for ARP message responses from other devices on the remote network.

6. The method of Claim 5, wherein determining if another device 15 attached to the remote network has responded to the ARP message further comprises:
sending a second ARP message identifying the unassigned network address onto the remote network; and
determining if a response to the second ARP message is received.

20 7. The method of Claim 3, further comprising:
evaluating the received connection request to determine if the received connection request is to a predetermined port; and
wherein responding to the connection request is not carried out if the connection request is not to the predetermined port.

25 8. The method of Claim 2, wherein configuring the network device includes replacing the default routing path to the source of the ARP message with at least one user configured routing path.

9. The method of Claim 3, wherein configuring the network device includes assigning a new network address to the network device which is different from the assumed unassigned network address of the connection.

5 10. The method of Claim 1, wherein the unassigned network address comprises an Internet Protocol address and wherein the connection comprises a Transmission Control Protocol connection.

10 11. The method of Claim 1, wherein the network device comprises a headless network device.

12. A method of assigning a network address to a network device which does not have an assigned network address, comprising:

15 receiving an Address Resolution Protocol (ARP) message at the network device, the ARP message specifying a target network address;

determining if target network address of the received ARP message is an unassigned network address;

20 responding to the received ARP message so as to assume ownership of the target network address if the target network address is an unassigned network address; and

setting a default routing path of the network device to a source address of the received ARP message such that communications to devices which are in a network remote from the network associated with the network device are sent to the source address.

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13. The method of Claim 12, further comprising:

receiving a connection request to the target network address and to a predefined port;

30 responding to the connection request utilizing the default routing path so as to establish a connection to the network device.

14. The method of Claim 13, wherein the connection is established between the network device and a configuring device, the method further comprising configuring the network device utilizing the established connection.

5 15. The method of Claim 14, wherein configuring the network device comprises assigning a new network address to the network device.

16. The method of Claim 14, wherein configuring the network device comprises providing updated routing information to the network device to replace
10 the default routing path of the network device.

17. The method of Claim 12, wherein determining if a target network address of the received ARP message is an unassigned network address comprises:
sending an ARP message from the network device which identifies the
15 target network address; and
determining that the target network address is not an unassigned network address if a response to the ARP message from the network device is received within a predefined time period.

20 18. The method of Claim 12, wherein the target network address comprises an Internet Protocol address and the ARP message comprises an ARP request.

19. The method of Claim 18, wherein setting a default routing path of
25 the network device to a source address of the received ARP message such that communications to devices which are in a network remote from the network associated with the network device are sent to the source address comprises setting the default routing path for destination devices associated with an IP subnet which is different from an IP subnet associated with the network device to a sender IP
30 address of the ARP request received by the network device.

20. The method of Claim 12, wherein the network device comprises a headless network device.

21. A system for communicating with a network device which does not
5 have an assigned network address, comprising:
a network device; and
means for establishing a connection from a configuring device to the
network device utilizing an unassigned network address for the network to which
the network device is attached irrespective of whether the network device is
10 attached to a network local to or remote from the configuring device.

22. A system for assigning a network address to a network device which
does not have an assigned network address, comprising:
means for receiving an Address Resolution Protocol (ARP) message at the
15 network device, the ARP message specifying a target network address;
means for determining if target network address of the received ARP
message is an unassigned network address;
means for responding to the received ARP message so as to assume
ownership of the target network address if the target network address is an
20 unassigned network address; and
means for setting a default routing path of the network device to a source
address of the received ARP message such that communications to devices which
are in a network remote from the network associated with the network device are
sent to the source address.

23. A computer program product for communicating with a network
device which does not have an assigned network address, comprising:
computer-readable program code embodied in a computer-readable media,
the computer-readable program code comprising:
30 computer-readable program code which establishes a connection from a
configuring device to the network device utilizing an unassigned network address

for the network to which the network device is attached irrespective of whether the network device is attached to a network local to or remote from the configuring device.

- 5 24. A computer program product for assigning a network address to a network device which does not have an assigned network address, comprising:
- computer-readable program code embodied in a computer-readable media, the computer-readable program code comprising:
- computer-readable program code which receives an Address Resolution
- 10 Protocol (ARP) message at the network device, the ARP message specifying a target network address;
- computer-readable program code which determines if target network address of the received ARP message is an unassigned network address;
- computer-readable program code which responds to the received ARP
- 15 message so as to assume ownership of the target network address if the target network address is an unassigned network address; and
- computer-readable program code which sets a default routing path of the network device to a source address of the received ARP message such that communications to devices which are in a network remote from the network
- 20 associated with the network device are sent to the source address.